UNITED STATES PATENT AND TRADEMARK OFFICE

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10/551,199	10/06/2006	Toshiaki Kakutani	MIPFP178	4060

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MARTINE PENILLA & GENCARELLA, LLP
710 LAKEWAY DRIVE
SUITE 200
SUNNYVALE, CA 94085

EXAMINER
WILLS, LAWRENCE E

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 July 2009*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-6,8,20,22,24-26,28,30,31 and 33* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1,2,4-6,8,20,22,24-26,28,30,31 and 33* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☒ All   b)☐ Some * c)☐ None of:
        1.☐ Certified copies of the priority documents have been received.
        2.☐ Certified copies of the priority documents have been received in Application No. _____.
        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *5-29-07;2-19-08;9-12/08*.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1.   Applicant's election without traverse of Species I in the reply filed on July 5, 2009

is acknowledged. Claims 14, 15, 17, 19, 23, 27, 29, and 32 claims the features of "a dot

number specification module that causes at least a plurality of the pixel groups to have

different relations between the image data of each pixel group and number of dots to be

created in the pixel group, and specifies number of dots to be created in each pixel

group according to the image data of the pixel group;" not of Species I and therefore will

not be considered.

Double Patenting

2.   Claims 1, 2, 4-6, 8, 20, 22-22, 24-26, 28, 30, 31, and 33 are provisionally rejected

on the ground of nonstatutory obviousness-type double patenting as being unpatentable

over claim 1 of copending Application No. 10/550,900. Although the conflicting claims

are not identical, they are not patentably distinct from each other because both claim

"An image output control system comprising an image processing device that makes

image data subjected to a preset series of image processing and an image output

device that creates dots according to a result of the preset series of image processing to

output an image, said image processing device comprising: a pixel group setting

module that collects a predetermined number of plural pixels, among a large number of

pixels constituting the image, to each pixel group; a dot number specification module

that causes image data of respective pixels in each pixel group to be represented

uniformly by preset representative image data and specifies number of dots to be

created in each pixel group according to the representative image data; and a number

data output module that outputs dot number data representing the specified number of

dots with regard to each pixel group to said image output device", and/or " said image

output device comprising: a number data receiving module that receives the output dot

number data with regard to each pixel group; a priority order specification module that

specifies a priority order of pixels for dot formation in each pixel group; a pixel position

determination module that determines position of each dot-on pixel included in each

pixel group, based on the received dot number data and the specified priority order; and

a dot formation module that actually creates a dot at the determined position of each dot

on pixel."

This is a provisional obviousness-type double patenting rejection because the

conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4.   Claims 1, 2, 4-6, 8, 20, 22-22, 24-26, 28, 30, 31, and 33 are rejected under 35

U.S.C. 102(b) as being anticipated by Zhang (US Patent No. 5,359,430).

Regarding claims 1, 5, 20, 22-22, 24-26, 28, 30, 31, and 33, Zhang'430 teaches an

image output control system (digital image processing system, 7, Fig. 1) comprising an

image processing device (image processor, 9, Fig. 1) that makes image data subjected

to a preset series of image processing (the steps of Fig. 2A) and an image output

device (receiver, 21, Fig. 1) that creates dots according to a result of the preset series of

image processing to output an image (the steps of Fig. 10), said image processing

device comprising: a dot number specification module (comparator, 11, Fig. 1) that

collects a predetermined number of plural pixels (array blocks column 3, line 56),

among a large number of pixels constituting the image (continuous tone image 86

column 3, line 55), to each pixel group and specifies number of dots to be created in

each pixel group according to the image data (a block count for each block is initialized

in step 18, column 3, lines 58-59); and a number data supply module (memory storing

each count value for the multiple blocks in the image, column 4, line 8-10) that supplies

dot number data representing the number of dots specified with regard to each pixel

group to said image output device (block counts are received from memory in step 132,

Fig. 10, column 6, lines 33-35), said image output device (receiver, 21, Fig. 10)

comprising: a number data receiving module (decompressor, 23, Fig. 10) that receives

the dot number data with regard to each pixel group (Step 132, Fig.10); a priority order

selection module that selects a priority order of pixels for dot formation in each pixel

group (module in the receiver gets the gray patterns corresponding to block counts,

136, Fig. 10); a pixel position determination module (image controller, 25, Fig. 10) that

determines position of each dot-on pixel included in each pixel group, based on the

received dot number data and the selected priority order (using the block counts that

are received, the image controller recreates the second halftone image, column 6, lines

37- 38); and a dot formation module (output system, 29, Fig. 10) that actually creates a

dot at the determined position of each dot-on pixel (step 140, Fig. 10).

Regarding claims 2 and 6, Zhang'430 teaches wherein said priority order selection

module selects one priority order for each pixel group, among multiple priority orders

prepared in advance (Fig. 4a-4q, shows the prepared priority orders).

Regarding claims 4, 21, and 25, Zhang'430 teaches wherein said dot number

specification module refers to a dither matrix (threshold screen, abstract), which maps

threshold values to respective pixels arranged in a two-dimensional array, and specifies

the number of dots to be created in each pixel group (comparing the pixel values of

blocks of the continuous tone image with the cell value of a threshold array, abstract),

and said priority order selection module divides the dither matrix referred to for the dot

number specification into multiple groups corresponding to multiple pixel groups (arrays

column 3, lines 13-16), specifies a priority order of pixels in each pixel group based on a

result of comparison between the image data of respective pixels included in the pixel

group and corresponding threshold values (column 4, lines 5-10), and stores the

specified priority orders of the multiple pixel groups as the multiple priority orders, said

priority order selection module selecting one priority order corresponding to a position of

each pixel group in the image, among the multiple priority orders based on the dither

matrix (notice each gray pattern of the set 50 is a 4x4 array having a unique number of

pixels illuminated, column 3, lines 27-30).

Regarding claim 8, Zhang'430 teaches wherein said number data receiving module

receives the dot number data in each pixel group of plural pixels that are adjacent to

one another and have a preset positional relation (as in Fig. 5).

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to LAWRENCE E. WILLS whose telephone number is

(571)270-3145. The examiner can normally be reached on Monday-Friday 9:30 AM -

6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, King Poon can be reached on 571-272-7440. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/King Y. Poon/
Supervisory Patent Examiner, Art Unit 2625

LEW
September 14, 2009